From: Scott Cantrell

Sent: Thursday, July 21, 2005 1:24 PM

To: Dabbs, Paul

Cc: Banky Curtis; Diana Jacobs; Guivetchi, Kamyar Subject: DFG Comments on Bulletin 160- Update 2005

Please see the attached comments. If you have any questions please call me.

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Comment	Volume/	Page	Comment
Number	Chapter	Number	
	1/1	1-13	Provide environmental benefits-
			Add "managed wetlands" to the list of environmental benefits.
	1/2	General	The concept of an integrated approach to water management is a key initiative of the CWP. It
		Comment	would seem appropriate to mention DFG as an agency to work with relative to DWR's goal of
			supporting environmental stewardship.
	1/2	2-15	Box 2-8, "Consideration of all Competing Needs" should include environmental
			protection/ecosystem restoration as a competing "need".
	1/2	$2-19; 2^{\text{nd}} \#,$	Revise as follows: "California Endangered Species Act and Natural Communities Community
		last sentence	Conservation Program Planning Act.
	1/2	2-4	Consider adding Assist in the recovery of ESA/CESA listed aquatic and riparian species to the list
			of items under "Supporting Environmental Stewardship".
	1/2	2-9	Edit as follows to the first sentence on the page: "such as protecting and restoring <u>the</u>
			Sacramento-San Joaquin river system and Delta, Salton Sea"
	1/2	2-10	The subsection "Improve Flood Management" should include a discussion of ecological and
			economic values of intact floodplain ecosystems, and should include as a strategy (in third
			paragraph) the removal of structures from some flood-prone areas, and restoration of
		,	ecological/geomorphological/hydrological functions.
	1/2	2-19, 3 rd #,	The way the sentence reads, F&G code section 5937 applies only to DWR. Should be reworded to
		last sentence	reflect the fact that 5937 applies to all dam owners.
	1/2	$2-28, 2^{\text{nd}}$	Consider modifying sentence to read: "Storing and transporting water from one part of the
		#	environment for use in another"
	1/2	$2-28, 2^{\text{nd}} \#$	This paragraph should also mention that environmental evaluation includes an assessment of
			environmental protection and <u>ecosystem</u> restoration opportunities relative to water supply
			reliability and water quality.
	1/3	$3-3, 5^{th} \#, 1^{st}$	The first sentence, as it reads, is not true for environmental water objectives. Consider modifying
		sentence	to read: "California meets most of its <u>agricultural, municipal, and industrial</u> water management
			objectives in most years."

1/3	3-4	The percentages included in this table should be verified as it appears that 35% to 63% of all water
	Table 3-1	goes to environmental uses. These percentages should be further broken out to show where all of
		the "environmental water" is going with appropriate source information cited.
1/3	3-4, next to	"60 percent is used either by native vegetation, evaporates to the atmosphere"
	last line	
1/3	3-5, last two	The CALFED "partnership" should be described along with the benefits the program has had in
	lines	reducing conflicts in water management.
1/3	3-10, 3 rd #	The CALFED levee program is more correctly titled the <u>CALFED Levee System Integrity</u>
		<u>Program.</u>
1/3	3-12,	The text attributes lack of storage as the cause of the salmon kill in the Klamath River, when in
	3 rd #	fact it was high temperature and crowding due to lack of sufficient instream flow due to excessive
		diversions during a dry period. The last sentence should more appropriately read: The low flows
		in the river <u>caused by agricultural diversions</u> and associated warm water temperatures also
		contributed to significant losses of the salmon populations.
1/3	3-12 and	The "c" in "coho salmon" should be lowercase.
	throughout	
1/3	3-12,	How is the statement that farmers have had their water supply reduced because of restoration
	last #	needs relevant to environmental water needs? From the environmental perspective, it would be
		more appropriate to replace the 2 nd sentence with the following so that it reflects the subject of the
		subheading: Impacts to aquatic habitat and listed species have been incurred due to a reduction in
		instream flows caused by diversion of water for farming.

1/3	3-12,	The details regarding ESA listing of steelhead and coho in this Region are incorrect. The correct
	last #	information for listed salmonids in this region is as follows:
		 Klamath Mountains Province steelhead (CA/OR border to and including the Klamath River): not listed.
		Northern California steelhead (just south of the Klamath to and including the Gualala): ESA listed as threatened in 2000
		 Central Coast steelhead (south of the Gualala to Santa Cruz Co).: ESA listed as threatened in 1997
		• So. Oregon – No. Calif Coast coho (CA/OR border to and including the Mattole River): ESA listed as threatened in 1997; CESA listed as threatened in 2005
		 Central Coast coho (just south of the Mattole River to Santa Cruz Co.: ESA listed as threatened in 1996; CESA listed as endangered in 2005.
		 Coastal Chinook salmon (just south of the Klamath to and including the Russian River: ESA listed as threatened in 1999.
1/3	3-15; 1 st full	The statement under Environmental Water Supply "Additional ecosystem protection and
	#	restoration are needed to continue improving habitat for threatened and endangered species" is
		true for all the hydrologic regions, not just the Sacramento River Hydrologic Region. We suggest you also add a brief description of the EWP, EWA and Lower Yuba River Accord in the
		Sacramento River Hydrologic Region section.
1/3	3-23, last two lines	Stage 1 implementation should be defined as the first seven years of program implementation.
1/3	3-34; 3 rd	Edit: Natural Community Conservation Planning Act.
	bullet	
1/3	3-35; 6 th	Add text that says DFG is a trustee for fish and wildlife resources (FGC § 1802).
	bullet	
1/3	$3-42, 2^{\text{nd}} \#,$	The text states "most of the Delta's 350 acres of freshwater marsh were leveed" 350 acres is
	last sentence	a significant underestimate of what historically occurred in the delta. The CALFED ERP, Vol. 1
		(page 140) states that over the past 150 years, more than 300,000 acres of fresh emergent wetlands
		have been lost in the delta. We suggest you provide better estimates of habitat losses with references.

1/3	3-44, Figure	A definition of "managed" environment should be provided here and in other water balance
	3-5	figures.
1/3	3-47, 3 rd #	The statement "In the North Coast, hydropower facilities completely block all historical spawning grounds for salmonids" is quite overstated. Although on some river systems such as the Klamath, dams have blocked a significant amount of historical spawning habitat, accessible spawning habitat still exists.
1/3	3-53;	A more detailed description of the California Bay Delta Authority and the CALFED Program is
	CALFED	warranted in this section.
	Program	
1/4	4-3, Data	The statement that data are "simply not available" should be modified with respect to native
	Gaps	vegetation. It may be more accurate to characterize this as a data gap and that cooperating
		agencies need to work on filling in these gaps.
1/4	4-10 to	Scenario 1, 2, and 3, Environment Bullet –
	4-12	Level 4 water supplies are also dedicated to State wildlife areas and private wetlands (in addition to national wildlife refuges) identified in CVPIA section 3406.
1/4	4-10 to 12	Environmental discussions are restricted to ecosystem restoration goals and objectives contained within CALFED and AFRP. It would seem that ecosystem restoration and preservation will continue throughout the state and will not be limited only to actions specified by CALFED and AFRP. Effort should be made to describe NCCPs, HCPs and other regional large scale ecosystem planning efforts in each scenario.
1/4	4-12, 3 rd #	We suggest the document describe the water demand estimator model (Groves, Matyac and
	from bottom	Hawkins, 2005) in more detail. What level of peer review has the model undergone?
1/4	4-35,	Add a principle to Transparency: Models used should either be ones that are already widely
	Box 4-4	accepted or have undergone extensive peer review.
1/4	4-45, Box 4-	The "Comprehensive Evaluation of Sacramento-San Joaquin Delta River Levee Programs" is now
	7 and	titled the "Delta Risk Management Strategy".
	elsewhere	

1/5	Listed Recommend	Suggest that a better effort be made to connect the Performance Measures more directly to the Intended Outcomes. In some cases this means expanding the performance measures and in other
	ations	cases it involves expanding the list of intended outcomes. Also, the performance measures should be quantifiable.
		It would be helpful to quantify as best as possible how much/what percentage of each recommendation could be achieved with existing resources and how much additional money would be required to implement 100% of all of the recommendations. If the money is not going to be available then the recommendations should be scaled back accordingly, or a subset identified as the highest priority, that would attain at least some of the goals, presumably the most important to the State, as specified in this Update.
		Also, this Update places a tremendous financial burden on local governments and agencies. These entities are currently operating at their financial limits. The Update should identify how these entities will implement the recommendations on a regional basis, rather than suggesting unfunded mandates.
1/5	5-11, Recommend	The Delta Levee system is an integral part of the water infrastructure and conveyance system for the State. It should also be evaluated as a necessary component of this recommendation with
1/5	ation #4 5-3, Table 5- 2	accompanying evaluations, strategies for improving/ maintaining it, and funding sources. Table 5-2 should include information about metrics that will be used for the evaluation criteria. With respect to the Evaluation Criteria of "urban, agricultural or environmental reliability" the "or" implies that a reliable water supply, etc. for environmental uses is an option. The "or" should be changed to an "and" to denote the importance of the natural environment relative to water supply reliability, quality, etc.
1/5	5-5	Recommendation 1 - develop water supplies to maintain and improve California's environment - should include strategies to accomplish environmental scenario "targets" for Level 4 water acquisition referenced in comment above (acquisition of Level 4 water is currently restricted by federal/State budgetary limitations and spot market competition).

1/5	5-26	Under the "Action Plan Heading add the following two items to the Action Plan list:
		 DWR will protect the public trust as they represent the State on interstate river compacts such as the Klamath River Compact. DWR will protect the public trust in connection with water master duties on adjudicated
2/9	9-3	<u>streams.</u> Benefits of Ecosystem Restoration-
2/7	7-3	Comment: Add a description of "managed wetlands" to this section. We recommend the inclusion of managed wetlands, including the CVPIA 3406 refuge water supply program, due to it's potential contribution to many of the Water Management Objectives listed in Table 1-1 (page 1-4) including Improve Water Quality, Reduce Flood Impacts, Environmental Benefits, Recreational Opportunities, and Reduce GW Overdraft. Also note the importance of "wildlife viewing" in Figure 24-1 on page 24-1 which was rated the highest water-dependant activity in the referenced poll. Managed wetlands, and public access to them, play a critical roll in wildlife viewing.
2/Ch.2-26		All of these chapters (2-26) should be reviewed for cross-program consistency and integration of recommendations. For example, in Chapter 4, Conjunctive Management and Groundwater Storage, it is indicated that significant recharge of the aquifer can occur from water placed into unlined conveyance facilities (pg. 4-1). However, in Chapter 5, Conveyance, it is recommended that unlined canals be lined. Chapter 4 is well written in that it discusses the negative and positive effects of certain actions. Other chapters should provide more details on how to integrate management strategies. Chapter 3 should provide a list of sources used to prepare it.
2/12	12-1	Suggest deleting or revising 3 rd sentence in paragraph 1: "High quality water sources can be used for drinking and industrial purposes that benefit from higher quality water, and lesser quality water can be desirable for some uses, such as riparian streams with plant materials benefiting fish." This sentence suggests that water quality is not an important factor for fish or the aquatic environment. "Lesser quality water" is "never desirable" per se. This sentence needs be rewritten.
2/1	1-3	The Strategy Summary Table should be augmented to indicate how implementation of one strategy might reduce the ability to implement one or more of the other strategies as described in the first two lines on page 1-3.

2/1	1-4; Table	In the Ecosystem Restoration row, add a bullet under Improve Water Quality (see text describing
	1-1	these benefits, page 9-3, 4 th paragraph).
2/5	5-1; 4 th #	Edit: The network of Delta levees and the hundreds of miles of interconnected channels provide
		convey water for in-Delta use and to the south of Delta pumping facilities.
2/5	5-2; left	"This could involve beneficiaries such as fish habitat (temperature, flow or quality
	column,	improvements), riparian vegetation, rafting or recreational turf."
	middle #	
		Comment: What is "recreational turf"? Soccer fields? Parks? Golf courses?
2/5	5-2; text box	Edit: "Under the CALFED Conveyance Program, the CALFED Record of Decision calls out
		specific through-Delta conveyance actions that are to be <u>studied for technical feasibility or</u> either
		directly implemented. or otherwise pursued including"
2/5	5-2; footnote	Edit: System flexibility is defined as the ability to adaptively operate, or optimize, multiple water
		management <u>strategies</u> options by controlling the timing, flow rate, location or quality of available
		supplies.
2/5	5-3; 3 rd and	"The details of the studies are expected to be reported in administrative Draft EIR/EIS Report for the 8,500
	5 th #	cfs operations project."
		"These results [SLR Low Point Project] are reported in the administrative Draft EIR/EIS of the project."
		Comment: In general, administrative draft EIR/EIS documents are not available to the public. We
		suggest you change these sentences to say that the details of these studies will be available for
		review by the public when the Draft EIR/EIS is released.
2/5	5-4; 4 th	Edit: Given the high-intensity, short duration characteristics of California's hydrology, improved
	bullet	conveyance capacities ean divert enable diversions of more water during high flow/less
		competitive periods
2/5	5-6; number	Provide finances for lining of AAC & Coachella Canals – to make available 102 taf annually to
	4	South Coast Region MDWSC agency.
		Comment: Do you mean MWDSC?
		Comment 20 Journal 12 (1200)

2/9	9-5	Recommendations List: Add the following two items to the numbered Recommendation list on this page:
		* The Resources Agency and Cal-EPA should work with their respective
		departments, boards and commissions to ensure implementation of specific Ecosystem Restoration
		Projects they supported in the CEQA/NEPA environmental decision making process (for example
		the Trinity River Restoration Program ROD and the CALFED ROD).
		* The Resources Agency and Cal-EPA should work with their respective departments, boards and
		commissions to support legislatively mandated anadromous fishery restoration efforts in the
		Klamath-Trinity Basin and the Central Valley Basin.
Volume 2	16-1	Recycled Municipal Water –
Chapter 16		The chapter should include the existing and potential expanded use of RMW at public managed
		wetlands.
2/19	19-1; 1 st #	"System reoperation could be used to rebalance existing and new water supplies, improve the efficiency of existing uses, or improve some uses and decrease others."
		Comment: The latter part of this sentence isn't very clear. What is meant by "improve some uses and decrease others"?
2/19	19-1; 3 rd #	Edit: The firm-yield approach seeks to deliver the same amount every year regardless of water supply
	,	conditions while the risk-based approach balances increasing deliveries in a given year with the risk of not meeting full deliveries in a <i>subsequent</i> dry year.
2/19	19-4; middle #	"Long-term costs may include capital costs for the construction, modification, or removal of facilities"
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Comment: This is not reoperation, per se.
2/19	19-6;	Edit 1.a as follows: Review the quality and available availability and quality of scientific data on the
	recommend-	ecological impacts of system reoperation on the aquatic environment.
	ations	
		Edit 1.d as follows: Conduct research to address information gaps regarding potential environmental
		effects of system reoperation and disseminate new scientific and technical information to the public and
2/10	10.6.1	scientific community.
2/19	19-6 and	Page 19-7 appears to be a duplicate of page 19-6.
	19-7	

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2/1	Ending	This devices we shall be a second of the sec
3/1	Entire	This chapter summarizes the 12 regional water supply and use reports which comprise the rest of
	Chapter	Volume 3. "Environmental Water" includes managed wetland water, and is quantified in the
		Statewide and regional water balance summaries, flow diagrams, and Water Portfolios under
		various use, loss, and return flow categories. It should be noted that private, State and federal
		Central Valley managed wetlands receiving CVP water under CVPIA 3406 (d) are currently
		conducting individual water balance exercises which could refine the input data and contribute
		additional detail to this chapter.
3/1	1-12	Groundwater is identified as a significant category with insufficient data. We recommend linking
		the status of AB3030 groundwater management plans into this section, which would both fill some
		of the data gaps and provide a linked resource to this information from Bulletin 160.
3/2	2-4; last #,	The text states: "Fisheries can be adversely affected by a number of water quality factors."
	first	
	sentence	Comment: Recommend revising as follows with the bolded addition of water quantity: "Fisheries
		can be adversely affected by <u>a number of factors related to both water quality and water quantity.</u>
3/2	2-6; first #,	The text states: "In 2002, about 33,000 adult salmon died trying to swim up the Klamath due to
	last sentence	water quality problems." Recommend revising the statement to include water quantity as a
		causative factor as follows: "In 2002, about 33,000 adult salmon died trying to swim up the
		Klamath due to water quality and <i>quantity</i> problems (reference is DFG Fish Kill Report)."
3/2	2-9; first full	The text states: "The federal listing of Coho salmon and steelhead under the Endangered Species
	#, sentence 2	Act generates additional regulatory requirements that affect all surface water uses on these rivers."
		Recommend adding the following: The federal listing of Coho salmon and steelhead under the
		Endangered Species Act <u>and the state listing of the Coho salmon</u> generates additional regulatory
		requirements that affect all surface water uses on these rivers. The Department of Fish and Game
		has prepared a Coho salmon Recovery Plan to guide actions directed at the recovery of this
		species.
3/6	6-4, Line 8	The discussion of return flows should include a discussion of their water quality.
3/6	6-7, Water	Sentence #3 provides some reasons for the decline of fishes in the Sacramento River. An
	Quality,	additional sentence should be included that describes other potential factors such as NIS, flows
	First #	and flow patterns (e.g., timing, cross-Delta flows).
	•	

3/6	6-16, 2 nd to last #	"Outreach effortsthe CBDA plan in the Sacramento Valley". Based on what is presented in the text, it is not clear what the CBDA "plan" is. Is it the CALFED ROD? If it is regional cooperation and collaboration as discussed in the preceding paragraphs, then perhaps it should be stated that way.
3/6	Figure 6-4, Pg. 6-20	The legend for Figure 6-4 shows Colorado and State water project supplies. However, neither of these supplies is depicted on Figure 6-4.
3/7	7-3	Following are the correct State wildlife area acreages: Los Banos 5,586; Volta 2,891; and North Grasslands 7,069.
3/12	12-17	Under the Ecosystem Restoration Heading, the second sentence states: "Many of the efforts listed here will also benefit as better scientific information is obtained to develop specific, quantitative objectives for ecosystem restoration." Recommend the following revision: "Many of the efforts listed here will also benefit as better scientific information is obtained to develop specific, quantitative https://doi.org/10.1007/journal.org/https://doi.org/10.1007/journal.org/https://doi.org/10.1007/journal.org/https://doi.org/10.1007/journal.org/https://doi.org/10.1007/journal.org/https://doi.org/https://doi.org/https://doi.org/
3/12	12-13, Ongoing Planning Box	The second bullet incorrectly cites the "DFG Ecosystem Restoration Plan for the Delta". The proper title is "Delta Regional Ecosystem Restoration Implementation Plan (DRERIP)" and it is a multi-agency effort with DFG taking the lead.

3/12	12-18	First Bullet: "Update of ROD Programmatic Regulatory Commitments". The information contained in this section should be updated to reflect the outcome of the consultation:
		• The Notice of Determination (NOD) for the EWA EIS/EIR, pertaining to acquisition and management of EWA Assets between 2004 and 2007 (inclusive), was signed by the Department of Water Resources on March 18, 2004. The Department of Fish and Game, as a Responsible Agency, issued its NOD on October 6, 2004. The Record of Decision was signed by Bureau of Reclamation and the United States Fish and Wildlife Service in March 2004, and by National Marine Fisheries Service in September 2004.
		 The Department of Fish and Game, Fish and Wildlife Service and National Marine Fisheries Service authorized implementation of the EWA through 2007 under state and federal endangered species laws.
		 The EWA Agencies completed an evaluation of the efficacy of the EWA during the first four years of implementation, as required by the CALFED ROD. The EWA Agencies signed an MOU on September 30, 2004 to extend the EWA Operating Principles and to continue implementing the EWA through December 31, 2007.
		 The state and federal agencies that are signatories to the Conservation Agreement Regarding the CALFED Bay-Delta Program Multi-Species Conservation Strategy ("Conservation Agreement") signed an amendment to extend the Regulatory Commitments, and related processes, as discussed in Section VII of the Conservation Agreement, through December 31, 2007.
		Third Bullet: The next to last sentence ("Regional plans for most ofare underway.") should be deleted.
3/12	12-20; 1 st partial #	Second sentence: This should be updated to reflect that Congress acted on the Legislation and authorized the funds. However, to date, there has been little money appropriated.
3/13	13-11, Figure 13-2	The Legend for this Figure (13-2) includes "Required Delta Outflow" and "Managed Wetlands". However, neither is represented on the figure.
3/13	13-11, Figure 13-3	Legend includes: "Ground Water", "State Project", "Federal Projects" and "Colorado Project" but they are not represented on the figure.

	Volume 4	Reference Guide	Considering Water Use Efficiency for the Environmental Sector — This May 14, 2004 paper prepared for DWR by UC Berkeley contains seven case studies of environmental water management. One study is presented under "Benchmarking and Best Management Practices." It should be noted that while not in the paper, a second significant effort to apply BMP's to environmental water (managed wetlands) is the "refuge wetland habitat water management plans" required by USBR contracts with the Department of Fish and Game, US Fish and Wildlife Service and Grasslands Water District (to deliver water to certain State, Federal, and private managed wetlands in the Central Valley) which includes implementation of efficient water use BMP's. The importance of the UC Berkeley paper is underscored by the fact that it is specifically
and	Volume 5	Data Recommend ations	referenced (as Recommendation 4) in Chapter 4 – Ecosystem Restoration. Data gaps wherein the data need improvement- 1. Surface Water a. Local diversions currently states that "(Agricultural and Managed Wetlands have "Zero" information in most basins, so how do we improve on nothing?)" Suggest revision reflecting that managed wetlands have incomplete information in many basins, and that additional data, and the means to collect that data, is required. 2. Groundwater – same comment as above.
<end></end>			